MEDIALINK®

User Guide

MWN-WAPR150N

Wireless-N Broadband Router

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Chapter 1 Introduction

Thank you for purchasing Medialink's 150Mbps Wireless N Router!

MWN-WAPR150N utilizes advanced technology compatible with IEEE802.11n and IEEE802.11g/b standards, it can provide up to 150Mbps stable transmission rate. Additionally, it includes router, wireless access point, four-port switch and firewall in one, dedicated to SOHOs (Small Office/Home Office) and family networking.

It supports WDS (Wireless Distribution System) function for repeating and amplifying the signals to extend the wireless network coverage. Besides, the Router also supports all of the latest wireless security features, such as 64/128-bit WEP, WPA, WPA2, WPA&WPA and WPS (PBC and PIN) encryption methods, packet filtering and port forwarding, to prevent unauthorized access and protect your network against malicious attack.

In addition, URL and MAC address filtering can make it easy for parents and network administrators to manage network and QoS bandwidth control over specific computer's downloading speed is supported as well. Moreover, UPnP and WMM support can smooth your MSN voice, and the included Setup Wizard on CD-ROM will be quick and easy for non-savvy users to install the device and access the Internet.

1.1 Product Features

- Includes router, wireless access point, four-port switch and firewall in one
- Provides up to 150Mbps uploading and downloading speed
- Supports two WPS (Wi-Fi Protected Setup) encryption methods: PBC and PIN
- Compliant to IEEE802.11n, IEEE802.11g, IEEE802.11b, IEEE802.3 and IEEE802.3u standards
- Supports 64/128-bit WEP, WPA, WPA2, WPA&WPA2 encryption methods
- Supports RTS/CTS protocol and data partitioning function
- Provides one 10/100Mbps Auto-Negotiation Ethernet WAN port
- Provides four 10/100Mbps Auto-Negotiation Ethernet LAN ports
- Supports xDSL/Cable MODEM, static and dynamic IP in community networking
- Supports remote/local Web management
- Supports WMM to better smooth your voice and video
- Supports SSID stealth mode and access control based over MAC address (up to 30 entries)
- Supports Auto MDI/MDIX
- Supports wireless Roaming technology for high-efficient

wireless connections

- Supports auto negotiation/manual mode for 802.11b/802.11g/802.11n
- Supports UPnP and DDNS
- Supports Firefox 1.0, IE5.5 or above
- Supports SNTP
- Supports virtual server, DMZ host
- Built-in firewall for hacker's attack prevention
- Supports DHCP server/client
- Supports auto wireless channel selection
- Supports LAN access control to the Internet
- Provides syslog to record the status of the router
- Supports WDS wireless network extension
- Supports QoS function
- Built-in omni-directional antenna

1.2 Package Contents

Please unpack the box and check the following items:

- One MWN-WAPR150N Wireless Broadband Router
- One Quick Installation Guide
- One Power Adapter
- One Network Cable
- One CD-ROM

If any of listed items are missing or damaged, please contact

the Medialink reseller from whom you purchased for replacement immediately.

1.3 LED Indicator and Port Description

Front Panel and LED Indicator Show

LED indicator description on front panel (from L to R)

POWER

Solid indicates the power is connected and on.

SYS

Blinking indicates the system running.

WPS

When blinking, it indicates the device is negotiating with client in WPS mode.

WLAN (Wireless)

Wireless signal LED indicator. Slow blinking indicates the wireless function is enabled.

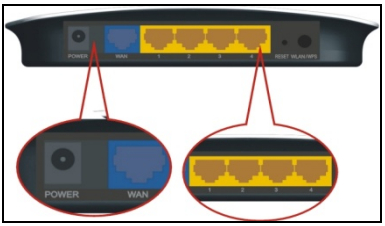
LAN (4, 3, 2, 1)

Wired local network LED indicator. Solid indicates it is connected with Ethernet device and the device is turned on; blinking indicates the device is transmitting and/or receiving data.

INTERNET (WAN)

Wide area network indicator. Solid indicates the Router's WAN port is connected and working; blinking indicates the port is being transmitted and received data packets.

Back Panel Show :



Rear Panel : (From L to R)

POWER

The jack is for power adapter connection. Please use the included 9V DC power adapter.

WAN

A 100Mbps Ethernet port, can be connected with MODEM, Switch, Router and other Ethernet device for Internet connecting to DSL MODEM, Cable MODEM and ISP.

LAN (1, 2, 3, 4)

4 10/100Mbps Ethernet ports can be connected with Ethernet switch, Ethernet router and NIC card.

RESET

The system reset button (recessed). Use a small non-metallic object to press this button for 8 seconds. The settings configured in this device will be deleted and it will restore the settings to the default.

WLAN / WPS

WPS button. Press it for 1 second, the WPS feature will be enabled and WPS indicator will be shown blinking.

Chapter 2 Router Installation

You will need to first determine what type of modem or internet source to which you are connecting this router (A, B, or C below). Then follow the appropriate instructions as explained in your connection type.

Your internet connection will fall into one of these categories:

- Dynamic IP/DHCP (Most Common)
- ADSL Virtual Dial-Up via PPPoE
- Static IP
- PPTP
- L2TP

A. Dynamic IP (Most Common Type)
(Cable Modem Users and some DSL Modem Users. Typical Cable Internet Service Providers: Comcast, Time Warner, Optimum, Cablevision, Cox, Charter.)

Dynamic IP/DHCP connection is the most common type used by most Cable Modems, Routers, Residential Gateways, and Wireless Modems. If this is your connection type, follow instructions in Section "2.1 How to Install the Router – For All Users Except DSL Modems" on Page 14. If you have a DSL

modem and you have a Dynamic IP or you're unsure of your connection type, proceed to Section "2.2 How To Install The Router – For DSL Modem Users" on Page 28.

B. ADSL Virtual Dial-Up via PPPoE

(DSL Modem Users)

Some DSL modems have the PPP protocol set to Bridge Mode (aka Transparent Bridging). Speedstream, Actiontec and Westell modems are some examples of modems that are usually set this way.

You will need to know your DSL Username and Password from your ISP for this type of setup. Proceed to "Section 2.2 How To Install The Router – For DSL Modem Users" on Page 28 for assistance. If your modem is set to Bridged, you will not be able to access the internet through the modem alone. The Medialink router will be sending your ISP the necessary username and password to establish the connection once you have entered them just as your computer does now or perhaps your previous router that you may be replacing did before.

C. Static IP, PPTP and L2TP

Static IP, PPTP, and L2TP connections are premium services. Follow instructions in Section 2.1 then , see Section 4.1 for assistance in finishing the configuration of your connection.

2.1 How To Install The Router – For All Users Except Users With a DSL Modem

(If you have a DSL Modem – do not follow these instructions. See section "2.2 How to Install the Router – For DSL Modem Users" on Page 28.)

Please follow these instructions BEFORE using your new Medialink router.

Important Notes:

- The CD contains a Setup Wizard, which is an alternative means to install/configure your router but is not required. There are no drivers or files needing to be installed on any computer or device in order to operate this router.
- It is highly recommended to install/configure the router while it is wired into a computer (Figure 2.1 - using the Ethernet cable included in your package, plug one end into the computer's Ethernet port and

the other end into one of the **YELLOW** Ethernet ports of the router). Once you have finished the installation/configuration you may then unplug this Ethernet cable from the computer and connect wirelessly (if applicable).

1. **Shut Down your computer**.

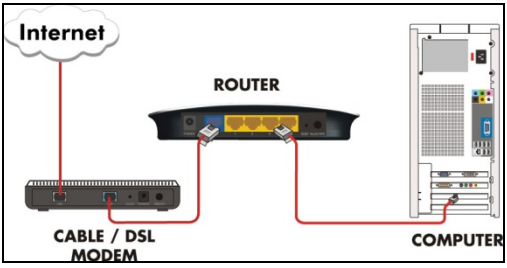
2. If you have an existing Wireless Router, please completely disconnect it from your computer and modem.

3. **Completely Power Down Your Cable Modem.** Unplug the modem's power cord and remove the battery (if applicable).
    a. If you do not have access to the modem, proceed to Step 4.

4. **Connect your Network Cable(s)**
    a. Plug a network cable from your Cable modem into your Medialink Router's **BLUE** WAN Port. (DO NOT connect the included AC/DC Adapter to the router's Power port at this time.)
    b. Using another network cable, plug one end

to your computer's network port. Plug the other end into one of the Medialink Router's **YELLOW** ports numbered 1, 2, 3, or 4.

(It is not required to connect a computer to the router at this point. But it is highly recommended for faster setup of your wireless network. Once setup is complete, you may then unplug the computer and connect wirelessly.)



(Figure 2.1)

5. **Power On your Cable Modem**.
   a. Plug in the power cord for your modem. Reinstall the batteries (if applicable).
   b. Wait for the modem to fully restart (the modem is fully restarted when the lights have been blinking or solid in a steady pattern for at least 30 seconds).

6. **Power on your Medialink Router**.
    a. Connect the AC/DC Adapter to the router's Power port. Connect the other end into an electrical outlet. Wait 10 seconds to allow the router to fully start.

7. **Check the status of your Medialink Router**.
    a. On the front panel of your Medialink Router, the POWER, SYS, WLAN, and INTERNET (WAN) LED's should be lit or blinking. If not, make sure the cables are connected correctly.

8. **Power ON Your Computer**.
    a. Turn on your computer
    b. It is recommended that you temporarily turn off any third party firewalls or networking software during installation of your Medialink Router.

9. **Confirm Access To The Internet** –
    a. If your computer is wired into the router, open your internet browser (For example, Internet Explorer, Firefox or Safari) and

confirm that you are able to access the internet. If so, proceed to Step 10 Configuring Your Wireless Network.

b. If your computer is wireless (not wired to the router), you will need to manually connect to the wireless network that begins with "Medialink". (Open the available wireless networks, click on the network name that begins with "Medialink", Then Click Connect).

***Important Note:** If your computer is requesting a "PIN" – DO NOT ENTER THE PIN (unless you are experienced with and intend to enable WPS on all your wireless devices). Instead, click the option **"I don't want to configure this network I just want to connect".**

Confirm access to the internet. If you are able to connect to the internet, proceed to Step 10 Configuring Your Wireless Network.

(for more details on how to connect to a wireless network see Section 2.4 on page 52)

- **If you cannot access the internet and you do not have access to your Modem**, see instructions under “2.1b No Modem Access”
- **If you cannot access the internet and you have a Residential Gateway, Router, or Wireless Modem** try changing the IP address of the Medialink router (see Section 2.2 Page 28) or Configure the Medialink router as a Wireless Access Point instead (see Section “2.3 Router to Router Configuration” on Page 48)
- **If you are sure that your device is a simple cable modem with no routing function, your Internet Service Provider may require that your router clones the MAC address of your computer** (see instructions below)

  Open an Internet Browser (you won’t have access to the internet but you just need the browser). In the address bar of your internet browser, type http://192.168.0.1 then when prompted, enter the Username: admin Password: admin. In the menu to the left, Click “Advanced Settings” then Click “MAC Address Clone”. Click “Clone MAC Address”, Click “Apply”, then Click “OK” to start the reboot. After the router reboots, confirm access to the internet.
- **If you still cannot access the internet and it is**

a simple cable modem with no routing or wireless functionality, please carefully repeat steps 1 thru 8 as it is important to correctly connect the devices and Power On the devices in the precise order as outlined in Steps 1 thru 8. When powering up your devices, make sure each device has completely restarted before powering up the next device.

If you still cannot connect to the internet, please call technical support at 856-216-8222 or download the latest FAQ at www.medialinkproducts.com/support

10. **Configuring Your Wireless Network** – Once you have completed the hardware installation, you may want to change your SSID (Name of Wireless Network) and Security type to a name and password that you will remember (the router's default SSID is "medialink") There are 2 ways to configure your wireless network:

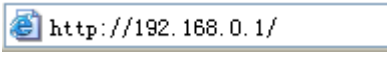
    a. **Option 1 (RECOMMENDED)** – Proceed to Step 11.

    b. **Option 2 -** Insert the CD into a computer that

is wired to the router and follow the Installation Wizard*.

*Important Note: If you lose internet connection or an IP address does not appear during Step 5 of the Installation Wizard – you will need to power cycle your devices (Repeat Steps 1 – 9). **When powering up devices, make sure each device has completely restarted before powering up the next one.** Then proceed to Step 11 to complete installation.

11. **Log In To The Router Settings Page** - Launch a web browser such as Internet Explorer or Firefox and in the address bar enter the Router's default IP address, http://192.168.0.1. Press "**Enter**".



12. **When Prompted, Enter The Default Login Information**: Enter "admin" for both the User Name and Password. Click "OK".

(If you are not prompted to enter the default login information, restart your computer and try Step 11 again.)

Connect to 192.168....
The server 192.168.0.1 at Wireless-N Broadband Router requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
admin
Password:
Remember my password
OK
Cancel

13. If you are able to log in to the router settings page, you will see the “Welcome to Setup Wizard” screen. (DO NOT CLICK NEXT)

14. **Name Your Wireless Network**:

Click **Wireless Settings**, then click **Basic Settings**.

Change the SSID name to a name that will identify your wireless network (For example: Smith or MyWireless.) Then, Click **Apply**. (Wait 10 seconds for the changes to apply. Click OK)

(For more details on your Basic Settings, open the “Help_BasicWirelessSecuritySettings.pdf document located in the User Guide folder on the CD.)

a. If you are not wired into the router, you will lose your connection. Open the available wireless connections, and re-connect to the new SSID. Then, re-login to the router

using the IP Address and Log in information (refer to Step 11 and 12).

15. **Secure Your Wireless Network**:

a. Click Wireless Settings, then click Wireless Security Settings (directly under Basic Settings).

b. Use the drop- down menu to select your security mode (WPA-Personal is recommended)

c. Change the Passphrase (aka Network Key or Password or Security Key) to something you will remember (must be at least 8 characters and can contain case-sensitive letters, numbers, and/or symbols). Click Apply. (Wait 10 seconds for the changes to apply. Click Ok)

d. If you are not wired into the router, you will lose your connection due to the security changes made on the wireless network. To re-establish the connection you will first need to delete the wireless network you were just connected to, then re-connect to your network:

- **Delete the Wireless Network:**

- Windows XP Users: Start>Control Panel > Network and Internet > Network Connections > Right click Wireless Network Connection > Properties > Wireless Networks Tab > Highlight your network in the list of Preferred Networks > Click Remove > Click OK > Click Close
- Windows Vista Users: Start > Control Panel > Network and Sharing Center > Manage Wireless Networks > Highlight your network in the list > Click Remove> Click OK
- Windows 7 Users: Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Wireless Networks > Highlight your network in the list > Click Remove>Click OK

o **Re-Connect To Your Network**

- Open the available wireless connections, and connect to the new SSID. You will then be prompted to enter the password

(aka passphrase, security key, passkey) that you just created.

- If you are able to re-connect to your wireless network, proceed to Step 16.

*If you're still not able to connect to the wireless network, it is highly recommended that you temporarily wire into the router for faster setup of your wireless network and go back through Steps 1 - 15 (when creating the SSID, use a different name from the one used in your first attempt) Once setup is complete, you may then unplug the computer and connect wirelessly.

(For more details in choosing your security Type see the "Help_WirelessNetworkSecurity.pdf"or "Help_WEP_WPA_WPA2.pdf" document located in the User Guide folder on the CD.)

16. **Congratulations!** You have successfully setup your Medialink Router! For help with connecting your wireless devices, see section "2.4 Connecting Your Wireless Devices" on Page 52.

2.1b No Modem Access

1. Open your internet browser and in the address bar type the IP address of the router (default is 192.168.0.1). Enter the username and password ('admin' for both) when prompted and click "ok".

2. Click on "System Status"

3. Click "Release" then "Renew"

4. Click "System Tools>Reboot". Reboot the router and try again to confirm access to the internet. If still no access, continue. If you have access, insert the CD and follow the prompts.

5. Click "Advanced Settings>MAC Address Clone". Click "Clone MAC Address".

6. Click "System Tools>Reboot". Reboot the router and try again to confirm access to the internet. If you have access, insert the CD and follow the prompts. If still no access, try restarting the computer. If you are able to access the internet after restarting your computer, go back to Step 10 to continue installing your router. If you are not able to access

the internet after restarting your computer, contact Tech Support – support@medialinkproducts.com or Call 856-216-8222 (Tuesday to Saturday 9am-6pm EST).

2.2 How to Install the Router – For DSL Modem Users

(and other users who require changing the default IP Address of the Medialink Router)

Some DSL Modems require the PPPoE connection to be handled by the router instead of the modem to be able to successfully create a network using some routers. If you typically have to enter a Username and Password into your computer to access the internet or if your previous router had your DSL Username and Password stored in it, please skip to section 2.2a ADSL Virtual Dial-Up via PPPoE. If you are unsure, continue below.

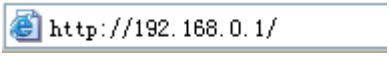
Please follow these instructions BEFORE using your new Medialink router with your DSL Modem.

1. **Connect A Computer To The Medialink Router** – Using a network cable, plug one end into the computer's network port. Plug the other end into one of your router's yellow ports.

2. **Power On The Medialink Router** - Connect the included AC/DC adapter to the router's power port.

Connect the other end into an electrical outlet. Wait 30 seconds to allow the router to fully start.

3. **Log In To The Router Settings Page** - Launch a web browser such as Internet Explorer or Firefox and in the address bar enter the Router's default IP address, http://192.168.0.1. Press "**Enter**".



4. **When Prompted, Enter The Default Login Information**: Enter "admin" for both the User Name and Password. Click "OK".
(If you are not prompted to enter the default login information, restart your computer and try Step 5 again.)

Connect to 192.168....
The server 192.168.0.1 at Wireless-N Broadband Router requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
admin
Password:
Remember my password
OK
Cancel

5. If you are able to log in to the router settings page, you will see the "Welcome to Setup Wizard" screen.

(DO NOT CLICK NEXT)

6. To the left of the screen, click Advanced.

7. **Change The IP Address** from 192.168.0.1 to **192.168.2.1**. Click Apply. A message will appear, Click OK. The Router will now begin to Reboot.

8. Once the router has completed the reboot process, you will automatically be logged back into the router settings page (DO NOT CLICK NEXT). If you are not directed back into the router settings page or if you see "Page Cannot Be Displayed" – still proceed to step 11.

9. **Shut Down Your Computer**.

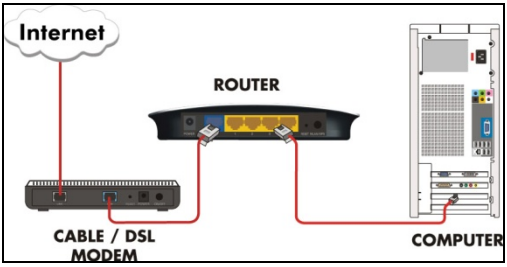
10. **Remove the Network Cable** from the back of the computer and from the back of the router.

11. **Power Down Your Medialink Router –** remove the power cord from the back of your router.

12. **Power Down Your DSL Modem –** remove the power cord from the back of your DSL modem. (DO

NOT press the reset button on your modem as it will remove all your settings.)

13. **Re-Connect your Network Cable(s)**
    a. Plug a network cable from your DSL modem into your Medialink Router's **BLUE** WAN Port. (DO NOT connect the included AC/DC Adapter to the router's Power port at this time.)
    b. Using another network cable, plug one end to your computer's network port. Plug the other end into one of the Medialink Router's **YELLOW** ports numbered 1, 2, 3, or 4.
    (It is not required to connect a computer to the router at this point. But it is highly recommended for faster setup of your wireless network. Once setup is complete, you may then unplug the computer and connect wirelessly.)



(Figure 2.1)

14. **Power On Your DSL Modem.** Plug in the modem's power adapter. Wait for the modem to fully restart (the modem is fully restarted when the lights have been blinking or solid in a steady pattern for at least 30 seconds).

15. **Power On Your Medialink Router.** Plug in the router's power adapter. Wait 10 seconds for the router to fully restart.

16. **Power On Your Computer.**

17. **Confirm Access to the Internet**.
    a. Open your web browser (For Example, Internet Explorer, Firefox, or Safari) and confirm that you are able to access the internet. If so, proceed to Step 18.

b. If your computer is wireless, you will need to manually connect to wireless network that begins with “Medialink”. (Open the available wireless networks, click on the network name that begins with “Medialink”, click connect). Confirm access to the internet. (for more details on how to connect to a wireless network see Section 2.4 on Page 52). If you are able to access the internet, proceed to Step 18.

c. **If you cannot access the internet**, your ISP may require that you clone the MAC address of your computer to the router. Follow these steps:

Open an Internet Browser (you won’t have access to the internet but you just need the browser). In the address bar of your internet browser, type http://192.168.0.1 then when prompted, enter the Username: admin Password: admin. In the menu to the left, Click “Advanced Settings” then Click “MAC Address Clone”. Click “Clone MAC Address”, Click “Apply”, then Click “OK” to start the reboot. After the router reboots, confirm access to the internet.

If you still cannot access the internet, proceed to section "2.2a ADSL Virtual Dial-Up via PPPoE " on Page 40 as you may need to input your DSL account information into the router for the internet connection to be established.

18. **Configuring Your Wireless Network** – Once you have completed the hardware installation, you may want to change your SSID (Name of Wireless Network) and Security type to a name and password that you will remember (the router's default SSID is "medialink") There are 2 ways to configure your wireless network:

    a. **Option 1 (RECOMMENDED)** – Proceed to Step 19.

    b. **Option 2 -** Insert the CD into a computer that is wired to the router and follow the Installation Wizard*.

19. **Log In To The Router Settings Page** - Launch a web browser such as Internet Explorer or Firefox and in the address bar enter the Router's new IP address, "http://192.168.2.1" Press "**Enter**".

    *If you did not change the default IP address of the

router in Section 2.2, Step 7 then go back to Section 2.2 and follow steps 1-19.

20. **When Prompted, Enter The Default Login Information**: Enter “admin” for both the User Name and Password. Click “OK”.

(If you are not prompted to enter the default login information, you will need to power cycle your devices (Power down all devices then Repeat Steps 16 – 19 to power up). When powering up devices, make sure each device has completely restarted before powering up the next one. Then try Step 19 again.)

If you are still not able to access the internet after performing a power cycle, contact Technical support for further assistance – support@medialinkproducts.com or Call 856-216-8222 (Tuesday to Saturday 9am-6pm EST).

Connect to 192.168....
The server 192.168.0.1 at Wireless-N Broadband Router requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
admin
Password:
Remember my password
OK
Cancel

21. If you are able to log in to the router settings page, you will see the “Welcome to Setup Wizard” screen. (DO NOT CLICK NEXT)

22. **Name Your Wireless Network**:

Click **Wireless Settings**, then click **Basic Settings**. Change the SSID name to a name that will identify

your wireless network (For example: Smith or MyWireless.) Then, Click **Apply**. (Wait 10 seconds for the changes to apply. Click Ok.)

a. If you are not wired into the router, you will lose your connection. Open the available wireless connections, and connect to the new SSID. Then, re-login to the router using the IP Address and Log in information (refer to Step 21 and 22).

(For more details on your Basic Settings, open the "Help_BasicWirelessSecuritySettings.pdf document located in the User Guide folder on the CD.)

23. **Secure Your Wireless Network**:

a. Click Wireless Settings, then click Wireless Security Settings (directly under Basic Settings).

b. Use the drop- down menu to select your security mode (WPA-Personal is recommended)

c. Change the Passphrase (aka Network Key or Password or Security Key) to something you will remember (must be at least 8 characters and can contain case-sensitive letters, numbers, and/or symbols). Click Apply. (Wait 10 seconds for the changes to apply. Click OK)

d. If you are not wired into the router, you will lose your connection due to the security changes made on the wireless network. To re-establish the connection you will first need to delete the wireless network you were just connected to, then re-connect to your network:

- **Delete the Wireless Network:**
  - Windows XP Users: Start > Control Panel > Network and Internet > Network Connections > Right click Wireless Network Connection > Properties > Wireless Networks Tab > Highlight your network in the list of Preferred Networks > Click Remove > Click OK > Click Close
  - Windows Vista Users: Start > Control Panel > Network and Sharing Center > Manage Wireless Networks > Highlight your network in the list > Click Remove > Click OK
  - Windows 7 Users: Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Wireless Networks > Highlight your network in the list > Click Remove > Click OK
- **Re-Connect To Your Network**
  - Open the available wireless connections, and connect to the new SSID. You will then be

prompted to enter the password (aka passphrase, security key, passkey) that you just created.

- If you are able to re-connect to your wireless network, proceed to Step 24.

*If you're still not able to connect to the wireless network, it is highly recommended that you temporarily wire into the router for faster setup of your wireless network and go back through Steps 13-20 (when creating the SSID, use a different name from the one used in your first attempt) Once setup is complete, you may then unplug the computer and connect wirelessly.

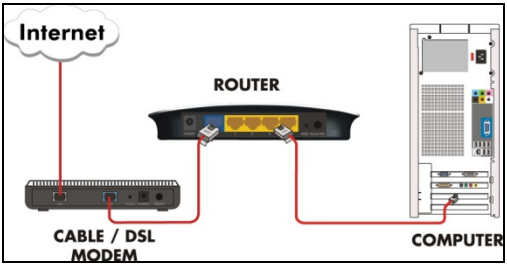
(For more details in choosing your security Type see the "Help_WirelessNetworkSecurity.pdf"or "Help_WEP_WPA_WPA2.pdf" document located in the User Guide folder on the CD.)

24. **Congratulations!** You have successfully setup your Medialink Router! For help with connecting your wireless devices, see section "2.4 Connecting Your Wireless Devices" on Page 52

2.2a ADSL Virtual Dial-Up via PPPoE (For users that have a Username and Password to connect via DSL)

If you were not successful in setting up the router after Section 2.2 or if you know that you need to enter your DSL Account username and password to establish an internet connection – continue with the additional instructions below:

1. **Connect Your Medialink Router** (Figure 2.1)
    a. Plug a network cable from your DSL modem into your Medialink Router's **BLUE** WAN Port.
    b. Using another network cable, plug one end to your computer's network port. Plug the other end into one of the Medialink Router's **YELLOW** ports numbered 1, 2, 3, or 4. (It is not required to connect a computer to the router at this point. But it is highly recommended for faster setup of your wireless network. Once setup is complete, you may then unplug the computer and connect wirelessly.)
    c. Power On your Medialink Router - Connect the AC/DC Adapter to the router's Power port. Connect the other end into an electrical outlet. Wait 30 seconds to allow



(Figure 2.1)

2. **Check the status of your Medialink Router**.
   a. On the front panel of your Medialink Router, the POWER, SYS, WLAN, and INTERNET (WAN) LED's should be lit or blinking. If not, make sure the cables are connected correctly.

3. **Log In To The Router Settings Page*** –
   *Important Note: You will not yet have access to the internet.
   a. Launch a web browser such as Internet Explorer or Firefox and in the address bar enter the router's IP Address "http://192.168.2.1"
      *If you did not change the default IP address of the router in Section 2.2, then your IP address will be "http://192.168.0.1"

b. If your computer is wireless, you will first need to manually connect to wireless network that begins with “Medialink”. (Open the available wireless networks, click on the network name that begins with “Medialink”, click Connect. (for more details on how to connect to a wireless network see Section 2.4 on Page 52). If you are able to connect to the network, go back to step 3a, then proceed to Step 4.

4. **When Prompted, Enter The Default Login Information**: Enter “admin” for both the User Name and Password. Click “OK”. Proceed to Step 5.

Connect to 192.168....
The server 192.168.0.1 at Wireless-N Broadband Router requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
admin
Password:
Remember my password
OK
Cancel

a. If you are not prompted to enter the default

login Information:

- Power Down Your DSL Modem (remove the power cable from the back of the modem).
- Power Down Your Router (remove the power cable from the back of the router).
- Shut Down Your Computer.
- Wait 2 Minutes
- Power Up Your DSL Modem (re-connect the power cable to the back of the modem). Wait for the modem to fully restart (the modem is fully restarted when the lights have been blinking or solid in a steady pattern for at least 30 seconds).
- Power Up Your Medialink Router (re-connect the power cable to the back of the router). Wait 30 seconds for the router to fully restart.
- Turn On Your Computer.
- Go back to Step 3 to Login to the Router Settings Page. If you're still not able to Log In, contact Technical Support for further assistance- support@medialinkproducts.com or call 856-216-8222 (Tuesday to Saturday 9am-6pm EST.

5. If you are able to log in to the router settings page, you will see the “Welcome to Setup Wizard” screen.
6. Click Next on the Setup Wizard.
7. Select “ADSL Virtual Dial-up via PPPoE” and click Next.
8. When prompted, enter your DSL username (typically the primary email address on the DSL account) and password (provided by your ISP), click Next.
9. The router will display the System Status Screen. The Network Status Connection Status will change from “Disconnect” to “Connecting” and then to “Connected”. At this point, you should have internet and you may proceed to Step 10 to configure your wireless network.
    a. If you do not have internet, check with your ISP to be sure that your modem does require your router to have the User Name and Password and that the info you entered is correct. If the User Name and Password are correct, contact Technical Support for further assistance- support@medialinkproducts.com or call 856-216-8222 (Tuesday to Saturday 9am-6pm EST.

10. **Name Your Wireless Network**:

Click **Wireless Settings** then click **Basic Settings**. Change the SSID name to a name that will identify your wireless network (For example: Smith or MyWireless.) Then, Click **Apply**. (Wait 10 seconds for changes to apply. Click Ok.)

(For more details on your Basic Settings, open the "Help_BasicWirelessSecuritySettings.pdf document located in the User Guide folder on the CD.)

a. If you are not wired into the router, you will lose your connection. Open the available wireless connections, and connect to the new SSID. Then, re-login to the router using the IP Address and Log in information ("admin" for username and password).

11. **Secure Your Wireless Network**:

a. Click Wireless Settings, then click Wireless Security Settings (directly under Basic Settings).

b. Use the drop- down menu to select your security mode (WPA-Personal is recommended)

c. Change the Passphrase (aka Network Key or Password or Security Key) to something you will remember (must be at least 8 characters and can contain case-sensitive letters, numbers, and/or symbols). Click Apply. (Wait 10 seconds for the changes to apply. Click OK.)

d. If you are not wired into the router, you will lose your connection due to the security changes made on the wireless network. To re-establish the connection you will first need to delete the wireless network you were just connected to, then re-connect to your network:

- **Delete the Wireless Network:**
  - Windows XP Users: Start > Control Panel>Network and Internet > Network Connections>Right click Wireless Network Connection > Properties > Wireless Networks Tab > Highlight your network in the list of Preferred Networks > Click Remove > Click OK > Click Close
  - Windows Vista Users: Start >

Control Panel > Network and Sharing Center > Manage Wireless Networks > Highlight your network in the list>Click Remove > Click OK

- Windows 7 Users: Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Wireless Networks > Highlight your network in the list > Click Remove>Click OK

- **Re-Connect To Your Network**
  - Open the available wireless connections, and connect to the new SSID. You will then be prompted to enter the password (aka passphrase, security key, passkey) that you just created.
- If you are able to re-connect to your wireless network, proceed to Step 12.

*If you're still not able to connect to the wireless network, it is highly recommended that you temporarily wire into the router for faster setup of your wireless network. Follow Step 1 (Page 40) to connect your router to a computer. Power Down then Power Up devices as described in Step 4a (Page

42). When creating the SSID, use a different name from the one used in your first attempt. Once setup is complete, you may then unplug the computer and connect wirelessly.

(For more details in choosing your security Type see the "Help_WirelessNetworkSecurity.pdf"or "Help_WEP_WPA_WPA2.pdf" document located in the User Guide folder on the CD.)

12. **Congratulations!** You have successfully setup your Medialink Router! For help with connecting your wireless devices, see section "2.4 Connecting Your Wireless Devices" on Page 52.

2.3 Router to Router Configuration

1. Connect your computer directly to the Residential Gateway, Wireless Modem or Original Router (will be referred to as "Original Router" in the remaining steps below) via an Ethernet cable.

2. Find the Default Gateway of the Original Router. It is typically 192.168.0.1 or 192.168.1.1. Here's how to find the Default Gateway:

   a. XP Users: Click on Start > Control Panel >

Network Connections > Right Click Local Area Connection > Status > Support Tab > Write down the Default Gateway.

b. Vista: Click on Start > Control Panel > Network and Sharing Center > Manage Network Connections > Right Click Local Area Connection > Status > Details > Write down the Default Gateway

c. Windows 7: Click on Start > Control Panel > Network and Internet > Network and Sharing Center > Change Adapter Settings > Right Click Local Area Connection > Status > Details > Write down the Default Gateway

3. Once you have the Gateway, disconnect the original router from your computer. Next, connect the Medialink router directly to the computer via an Ethernet cable (plug one end of the Ethernet cable to one of the Yellow LAN Ports of the Medialink Router. Plug the other end into the network port of your computer). Then, connect the AC/DC Adapter to the router's Power port. Connect the other end into an electrical outlet. Wait 30 seconds to allow the router to fully start.

4. Login to the Medialink router

a. launch a web browser such as Internet Explorer or Firefox and enter the Router's default IP address,

http://192.168.0.1. Press "**Enter**".

b. Input the "**admin**" in both User Name and Password.

c. Click "**OK**".

d. *Note* Do not Click the "Next" button to run the installation wizard once you have logged into the router.

5. Click on Advanced Settings and change the IP address to be the same as the Default Gateway of the Original router except the last number (ie: if the Default Gateway is 192.168.0.1, make the Medialink 192.168.0.XXX where XXX can be any number between 2 - 254)

6. Click Apply, and then OK, and the Medialink router will reboot.

a. If the browser does not refresh and allow into the Medialink router's web-based GUI through the new IP address you will need to do an IPCONFIG /RELEASE and then IPCONFIG /RENEW. See Section 5.1 for detailed instructions.

7. Once you are logged back into the Medialink router, name your wireless network: Click Wireless Settings, then click Basic Settings. Change the SSID name to a name that will identify your wireless network (For example: Smith or MyWireless.) Then, Click Apply. Click Ok.

8. Setup security for your wireless network: Click Wireless Settings, then click Wireless Security Settings. (For help in choosing your security type see the "Help_WirelessNetworkSecurity.pdf" or "Help_WEP_WPA_WPA2.pdf" document located in the User Guide folder on the CD.)

9. Disable the DHCP Server by clicking DHCP Server, uncheck Enable, click Apply.

10. Power down the Medialink router, and your original router by unplugging the power cord from the power outlet

11. Connect an Ethernet cable from the Original Router to any of the **YELLOW** LAN ports (Not the Blue WAN port) of the Medialink router. (At this point the Medialink router will have 2 x yellow ports occupied – one to the computer and one to the original router)

12. Power up the Original Router, wait 30 seconds for it to fully restart, Power up the Medialink Router, wait 30 seconds for it to fully restart.

13. Test the internet connection through the computer that is

currently hardwired to the Medialink Router.

a. If you do not have internet through the wired connection, you may need to power cycle all devices in the network and start them again slowly starting the device closest to the ISP connection (Steps 1 thru 8 in Section 2.1)

14. Test the internet connection to the Medialink Router via a wireless device.

If you still cannot connect to the internet, please download the latest FAQ at www.medialinkproducts.com/support or please call technical support at 856-216-8222

2.4 Connecting Your Wireless Devices

Once you have completed the setup of your wireless router, you will need to connect your wireless devices. Instructions on how to connect your device to a wireless network will vary. For more detailed instructions, see the user manual specific to your device.

Below are general instructions on how to connect a computer to the Medialink Wireless Network.

*Important Note: If your computer is requesting a "PIN" – DO NOT ENTER THE PIN (unless you are experienced with and intend to enable WPS on all your wireless devices). Instead, click the option **"I don't want to configure this network I just want to connect".**

1. Confirm your computer has a wireless network adapter and that it is turned on.

2. View Available Wireless Networks and Connect To Your Network (Your network name is the SSID). If you have enabled security during the setup of your router (Mixed WEP, WPA-Personal, WPA2) you will be prompted for the password (aka passphrase, security key, passkey) when you connect to your network.

   Viewing available wireless networks will vary based on your wireless network adapter and the operating system of your computer.

   For general instructions copy and paste the link below into the address bar of an internet browser window such as Internet Explorer, Firefox, or Safari

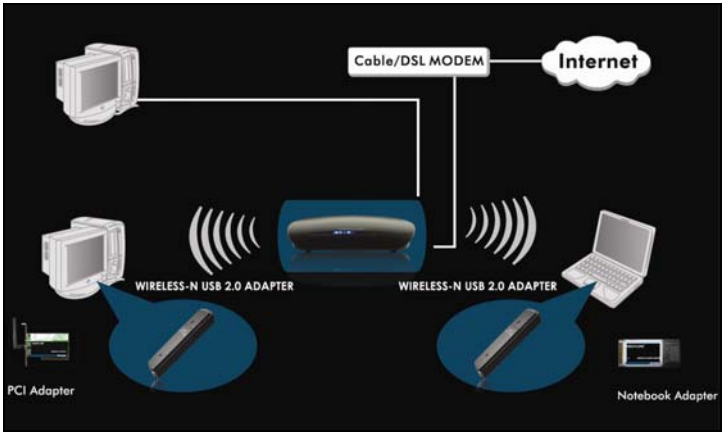
Windows Vista
http://windows.microsoft.com/en-US/windows-vista/View-and-connect-to-available-wireless-networks

Windows 7
http://windows.microsoft.com/en-US/windows7/View-and-connect-to-available-wireless-networks

iPad / iPod / iTouch
http://www.apple.com/support/ipad/assistant/wifi/#section_1

2.5 Optimizing Wireless Range

The best possible placement of your wireless router is nearest the center of your wireless devices. The internal antenna is omni-directional. Center the router both vertical and horizontally within the coverage area as much as possible. The router can be wall-mounted to achieve better signal as well.

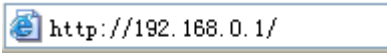

Cable/DSL MODEM
Internet
WIRELESS-N USB 2.0 ADAPTER
WIRELESS-N USB 2.0 ADAPTER
PCI Adapter
Notebook Adapter

Chapter 3 How to Login to the Router

This chapter explains how to enter the Router's Web-based Graphical User Interface or GUI. After you have finished the hardware installation, the following steps will assist you to set the network configurations for you computer.

3.1 Login to the Router

1. To access the Router's Web-based Graphical User Interface (GUI) or if you are completing the configuration of your router, you must first login to the router by launching a web browser such as Internet Explorer or Firefox and enter the Router's default IP address, http://192.168.0.1. Press "**Enter**".



2. Input the "**admin**" in both User Name and Password. Click "**OK**".

Connect to 192.168....
The server 192.168.0.1 at Wireless-N Broadband Router requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
admin
Password:
Remember my password
OK
Cancel

3. If you enter the correct user name and password, you will see the "Welcome to Setup Wizard" screen.

a. If you are logging in to the router to change your settings, choose the setting you would like to edit from the options to the left of the browser window.

4. **Configuring Your Wireless Network:** Once you have completed the hardware installation, you may want to change your SSID (Name of Wireless Network) and Security type to a name and password that you will remember (the router's default SSID is "medialink")

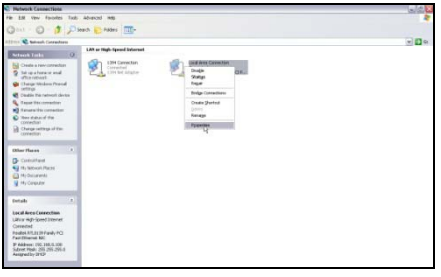
a. **Naming Your Wireless Network**: Click **Wireless Settings**, then click **Basic Settings**. Change the SSID name to a name that will identify your wireless network (For example: Smith or MyWireless.) Then, Click **Apply**. Click Ok.
(For more details on your Basic Settings, open the "Help_BasicWirelessSecuritySettings.pdf document located in the User Guide folder on the CD.)

b. **Change your Security Type:** Click **Wireless Settings**, then click **Wireless Security Settings**. (For help in choosing your security type see the "Help_WirelessNetworkSecurity.pdf" or "Help_WEP_WPA_WPA2.pdf" document located in the User Guide folder on the CD.)

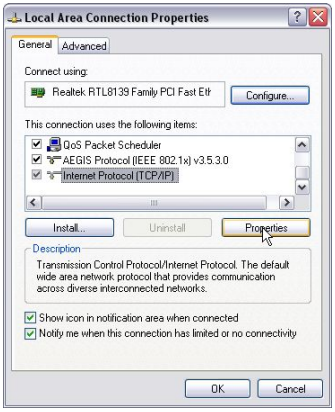
3.2 How to Set the Network Configurations

1. On your computer desktop right click "**My Network Places**" and select "**Properties**".

2. Right click "**Local Area Network Connection**" and select "**Properties**".



3 . Select "**Internet Protocol (TCP/IP)**" and click "**Properties**".



4 . Select "**Obtain an IP address automatically**" and "**Obtain DNS server address automatically**". Click "**OK**" to save the configurations.

Internet Protocol (TCP/IP) Properties
General
Alternate Configuration
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

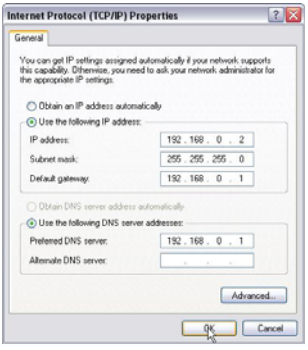
Or select "**Use the following IP address**" and enter the IP address, Subnet mask, Default gateway as follows:

IP Address: 192.168.0.XXX :(XXX is a number from 2~254)

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

You need to input the DNS server address provided by your ISP. Otherwise, you can use the Router's default gateway as the Preferred DNS proxy server. Click "**OK**" to save the configurations.

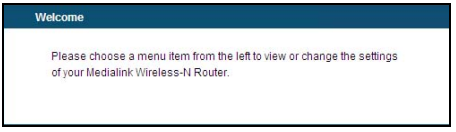

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 2
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 0 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 192 . 168 . 0 . 1
Alternate DNS server:
Advanced...
OK
Cancel

Chapter 4 Quick Setup Guide

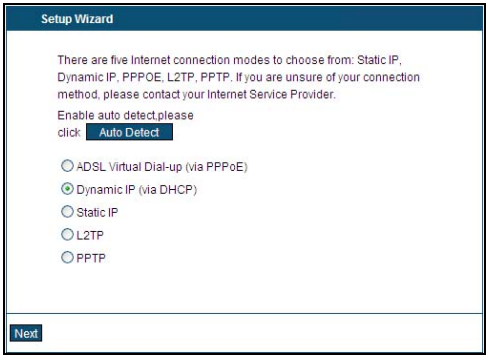
This chapter deals with how to install and configure your router via the Web-based Graphical User Interface (GUI). After you have completed the hardware installation steps in Chapter 2.1, you may proceed to Chapter 4.1 to run the router's setup wizard through the web-based interface rather than using the installation CD. This setup wizard merely establishes a connection to your ISP. To configure your wireless network, you must click Wireless Settings.

4.1 Setup Wizard

1. Here is the "**Welcome to Setup Wizard**" for configuring your Router quickly. Click "**Next**".



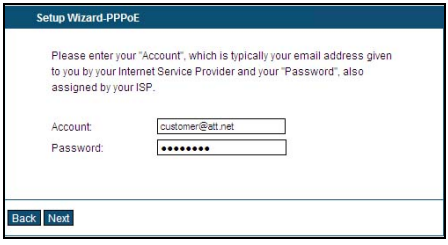
2. In this screen, select the type of Internet connection you use. If you are not sure, press the "**Detect**" button or contact your Internet Service Provider, and click "**Next**".


Setup Wizard
There are five Internet connection modes to choose from: Static IP, Dynamic IP, PPPOE, L2TP, PPTP. If you are unsure of your connection method, please contact your Internet Service Provider.
Enable auto detect,please click
Auto Detect
ADSL Virtual Dial-up (via PPPoE)
Dynamic IP (via DHCP)
Static IP
L2TP
PPTP
Next

ADSL Virtual Dial-up (Via PPPoE)

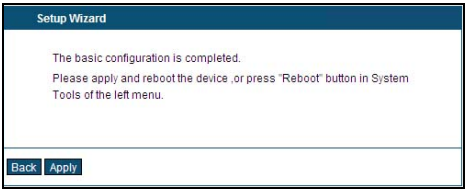
Enter the Account and Password provided by your ISP, and click "**Next**".

For example :


Setup Wizard-PPPoE
Please enter your "Account", which is typically your email address given to you by your Internet Service Provider and your "Password", also assigned by your ISP.
Account:
customer@att.net
Password:
Back
Next

Dynamic IP (Via DHCP)

If your connection mode is Dynamic IP, it means your IP address keeps changing every time you connect. You do not need to enter the information like other modes. Click "**Next**" and "**Save**" to finish the settings.


Setup Wizard
The basic configuration is completed.
Please apply and reboot the device ,or press "Reboot" button in System Tools of the left menu.
Back
Apply

Static IP

In this screen, fill in the network address information from your ISP in the IP Address, Subnet Mask, Gateway and Primary DNS server fields and click "**Next**".

For example :

ISP provides the following TCP/IP parameters as follows :

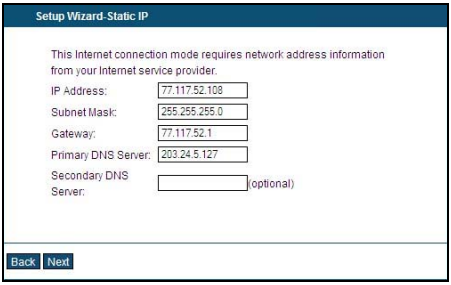
IP Address : 77.117.52.108

Subnet Mask : 255.255.255.0

Gateway : 77.117.52.1

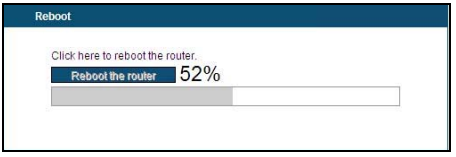
Primary DNS Server : 203.24.5.127

Alternate DNS Server: (optional)

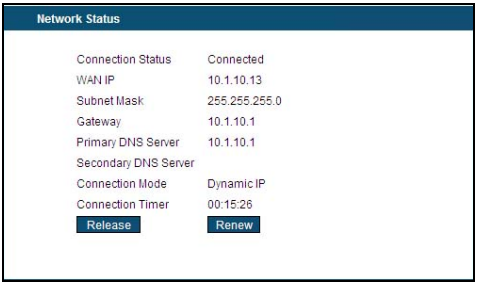


Click "**Save**" to complete the setup wizard. The Router will record the settings you made. To activate the settings, it is

recommended to select “Reboot the Router” from “System Tools” of the left menu.



Click the “***System Status***” in the left menu of the Web-based Utility to find out the current network and system information. If the “**Connection Status**” is “**Connected**”, you have completed the Router’s basic settings. Your computer will now have access to the Internet. If you want to configure more, please proceed to the following explanations for Advanced Settings. If it does not say “Connected” or it says “Connected” but you do not have internet access, try power cycling the devices including the modem, router, and computer, or contact your ISP to verify the Account and Password are correct.



L2TP

L2TP Server IP: Enter the Server IP provided by your ISP.

User Name: Enter L2TP username.

Password: Enter L2TP password.

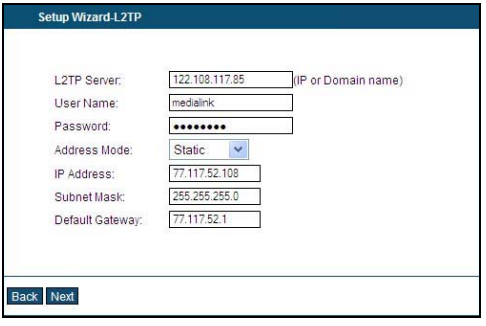
MTU: Maximum Transmission Unit, you may need to change it for optimal performance with your specific ISP. 1500 is the default MTU. Lowering this number might be ideal.

Address Mode: Select "Static" if your ISP supplies you with the IP address, subnet mask, and gateway. In most cases, select Dynamic.

IP Address: Enter the L2TP IP address supplied by your ISP.

Subnet Mask: Enter the Subnet Mask supplied by your ISP.

Default Gateway: Enter the Default Gateway supplied by your ISP.



PPTP

PPTP Server IP: Enter the Server IP provided by your ISP.

User Name: Enter PPTP username provided by your ISP.

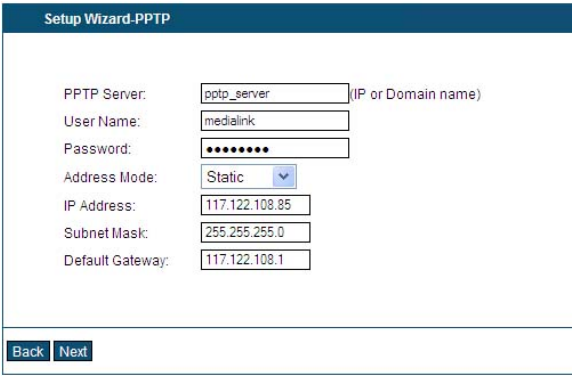
Password: Enter PPTP password provided by your ISP.

Address Mode: Select “Static” if your ISP supplies you with the IP address, subnet mask, and gateway. In most cases, select Dynamic.

IP Address: Enter the PPTP IP address supplied by your ISP.

Subnet Mask: Enter the Subnet Mask supplied by your ISP.

Default Gateway: Enter the Default Gateway supplied by your ISP.

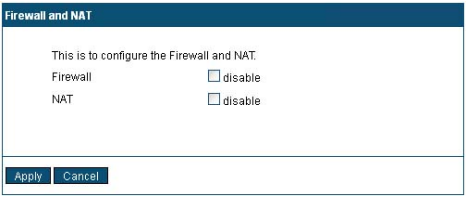


Chapter 5 Advanced Settings

5.1 Firewall

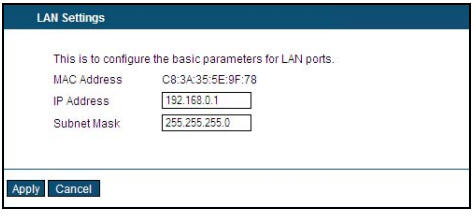
In this section you can disable the Firewall or NAT of the router. The Firewall and NAT are enabled by default when connecting an internet source to the WAN port of the Medialink router.

WARNING: Disabling the Firewall or NAT of the router can pose security risks. Please be sure you have local Firewalls in place on your connecting devices if you disable these functions within the Medialink router.



5.2 LAN Settings

LAN Settings are for the basic TCP/IP parameters of LAN ports.



- **MAC Address:** The Router's physical MAC address as seen on your local network, which is unchangeable.
- **IP Address:** The Router's LAN IP addresses (not your PC's IP address). 192.168.0.1 is the default value.
- **Subnet Mask:** The Router's subnet mask is the measurement of the network size. 255.255.255.0 is the default value.
- **IMPORTANT:** Once you modify the IP address, you need to remember it for the next time you login to the Web-based Utility.
- **CANNOT ACCESS ROUTER AFTER IP ADDRESS IS CHANGED:** You will need to renew the connection from the router to the computer by doing the following:

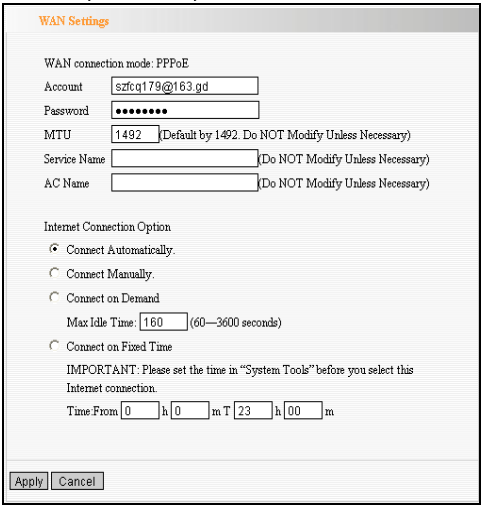
  XP Users: Start > Run > Type "cmd" > Enter > Type "ipconfig/release" > Enter > Type "ipconfig/renew" > Enter > Try again to access the router's settings page through the new IP address in a web browser.

  Vista/7 Users: Start > Type "cmd" into the search bar > Enter > Type "ipconfig/release" > Enter > Type "ipconfig/renew" > Enter > Try again to access the router's settings page through the new IP address in a web browser.

5.3 WAN Settings

After you have selected the ISP connection type in “Setup Wizard” here is where you can modify the related settings.

Virtual Dial-up (PPPoE)



- ✧ **Connection Mode**: Shows your current connection mode.
- ✧ **Account**: Provided by your ISP.
- ✧ **Password**: Provided by your ISP.
- ✧ **MTU**: Maximum Transmission Unit. It is the size of largest datagram that can be sent over a network. The default value is 1500. Do not modify it unless necessary.

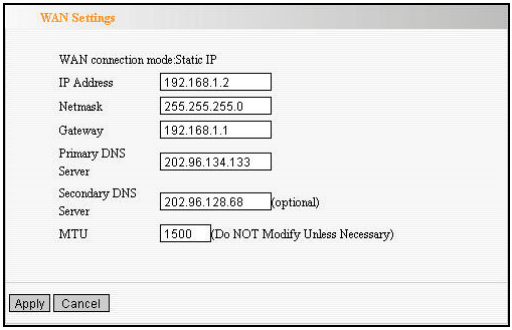
If some websites or web application software can not be open or enabled, try to change the MTU value to a lower value like 1492, 1450, 1400, etc.

- ✧ **Service Name**: Defined as a set of characteristics that are applied to a PPPoE connection. Enter it if provided. Do NOT modify it unless necessary.
- ✧ **AC Name**: Enter it if provided. Do NOT modify it unless necessary.
- ✧ **Connect Automatically**: Connect automatically to the Internet after rebooting the system or connection failure.
- ✧ **Connect Manually**: Connect to the Internet manually.
- ✧ **Connect on Demand**: Re-establish your connection to the Internet after the specific time (Max Idle Time). Zero means your Internet will stay connected at all times. Otherwise, enter the minutes to be elapsed before you want to disconnect the Internet access.
- ✧ **Connect on Fixed Time**: Connect to the Internet during the time you specify.

Notice:

The "Connect on Fixed Time" can be deployed only when you have set the current time in "Time Settings" from "System Tools".

Static IP

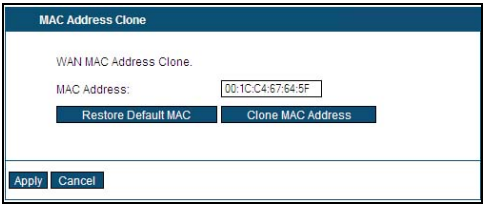


If your connection mode is Static IP, you can modify the following addressing information.

- **IP Address:** Here enter the WAN IP address provided by your ISP.
- **Subnet Mask:** Enter the WAN Subnet Mask here.
- **Gateway:** Enter the WAN Gateway here.
- **Primary DNS Server:** Enter the Primary DNS server provided by your ISP.
- **Secondary DNS Server:** Enter the secondary DNS.

5.4 MAC Address Clone

This page is for the Router's MAC address to WAN.

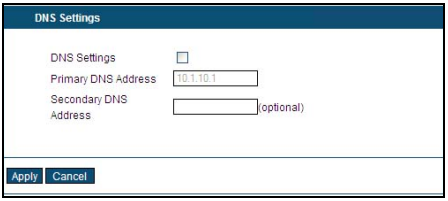


Some ISPs require end-user's MAC address to access their network. This feature copies the MAC address of your network device to the Router.

- ✧ **MAC Address:** The MAC address to be registered with your Internet service provider.
- ✧ **Clone MAC Address:** Register your PC's MAC address.
- ✧ **Restore Default MAC Address:** Restore to the default hardware MAC address.

5.5 DNS Settings

DNS is short for Domain Name System (or Service), an Internet service that translates domain names into IP addresses which are provided by your Internet Service Provider. Please consult your Internet Service Provider for details if you do not have them.



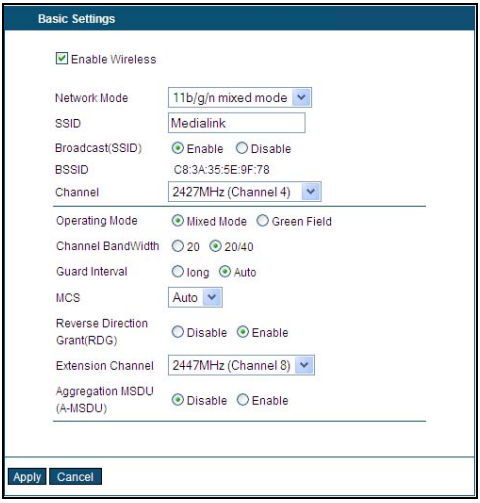
- **DNS:** Click the checkbox to enable the DNS server. The Router's DHCP sever will answer the client's requests and distribute DNS address.
- **Primary DNS Address:** Enter the necessary address provided by your ISP.
- **Secondary DNS Address:** Enter the second address if your ISP provides, which is optional.

***Notice**:*

After the settings are completed, reboot the device to activate the modified settings.

Chapter 6 WLAN (Wireless) Settings

6.1 Basic Settings



- **Enable Wireless:** Check to enable the Router's wireless features; uncheck to disable it.
- **Network Mode** : Select one mode from the list. The default is 11b/g/n mixed mode.
- **11b mode** :Allow the wireless clients to connect with the device in 11b mode only at the maximum speed of 11Mbps.
- **11g mode** :Allow the wireless clients to connect with the device in 11g mode only at the maximum speed of 54Mbps.

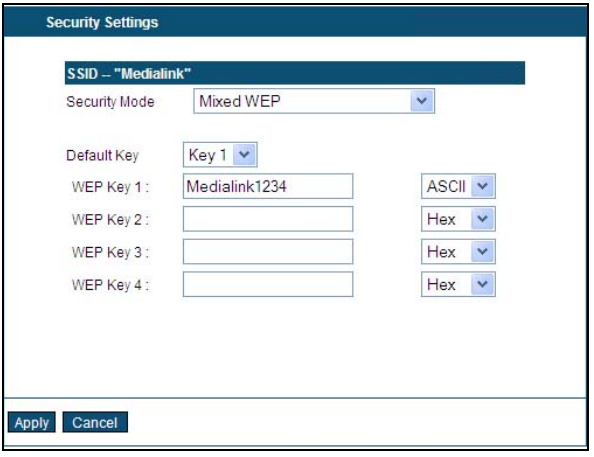
- **11b/g mode :** Allow the 11b/g-compliant client devices to connect with the AP with auto-negotiation speed, and 11n wireless client to connect the device with 11g speed.
- **11b/g/n mode (default):** Allow 11b/g/n-compliant client device to connect with the AP with auto-negotiation speed.
- **SSID *:*** SSID (Service Set Identifier) is the unique name of the wireless network.
- **Broadcast (SSID):** Select "Enable" to enable the device's SSID to be visible by wireless clients. The default is enabled.
- **BSSID *:*** Basic Service Set Identifier of wireless network. In IEEE802.11, BSSID is the MAC address of wireless access point.
- **Channel *:*** Specify the effective channel (from 1 to 11\Auto) of the wireless network.
- **Extension Channel *:*** To increase data throughput of wireless network, the extension channel range is used in 11n mode.
- **Channel Bandwidth :** Select the channel bandwidth to improve the wireless performance. When the network has 11b/g and 11n clients, you can select the 40M; when it is an 11n network, select 20/40M to improve its throughput.

6.2 Wireless Security Setting

Select the encryption method to be used to secure your wireless network and create your password.

6.2.1 Mixed WEP

WEP (Wired Equivalent Privacy), a basic encryption method, encrypts wireless data using a series of digital keys (64 bits or 128 bits in length). By using the same keys on each of your wireless network devices, you can prevent unauthorized wireless devices from monitoring your transmissions or using your wireless resources. Select Mixed WEP to enter the following window:



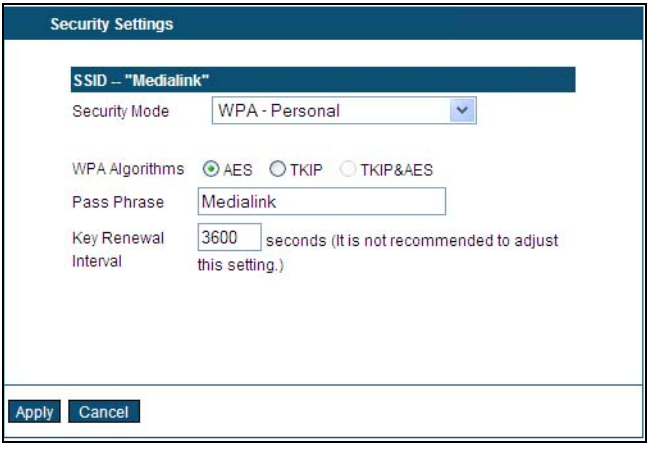
✧ **WEP Key1~4 :** Set the WEP key with the format of

ASCII or Hex. You can enter either ASCII code (5 or 13 ASCII characters. Illegal characters such as "/" is not allowed but all other case-sensitive letters, numbers and symbols are allowed) Or enter either 10 or 26 Hex characters (not case-sensitive – letters 'a' through 'f' and numbers only).

✧ **Default Key :** Select one key from the four configured keys as the currently active one.

6.2.2 WPA-Personal

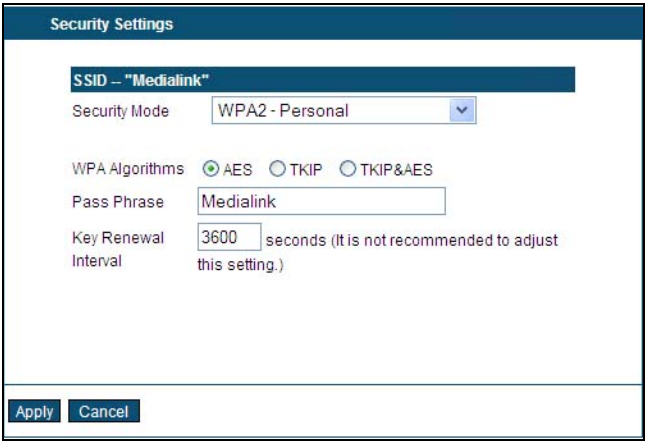
WPA (Wi-Fi Protected Access), a Wi-Fi standard, is a more recent wireless encryption scheme, designed to improve the security features of WEP. It applies more powerful encryption types (such as TKIP [Temporal Key Integrity Protocol] or AES [Advanced Encryption Standard]) and can change the keys dynamically on every authorized wireless device.



- ✧ **WPA Algorithms :** Provides TKIP [Temporal Key Integrity Protocol] or AES [Advanced Encryption Standard]. The default is AES mode.
- ✧ **Pass Phrase :** Create a password using 8-63 ASCII characters (case-sensitive letters, numbers and symbols are allowed).
- ✧ **Key Renewal Interval :** Set the key's renewal period. (3600 is the default)

6.2.3 WPA2- Personal

WPA2 (Wi-Fi Protected Access version 2) provides higher security than WEP (Wireless Equivalent Privacy) and WPA (Wi-Fi Protected Access) however, can slow your connection.



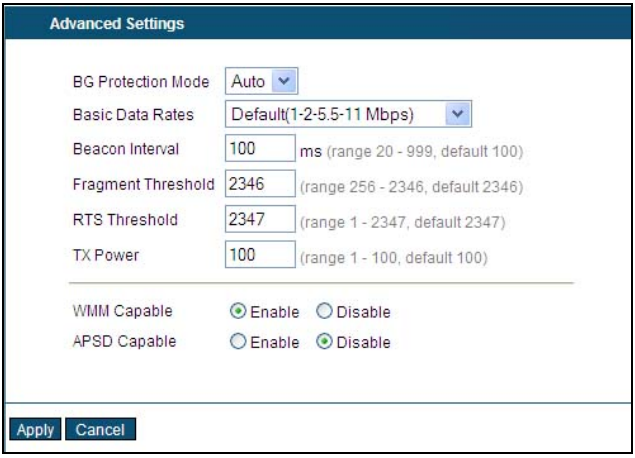
- ✧ **WPA Algorithms :** Provides TKIP [Temporal Key

Integrity Protocol] or AES [Advanced Encryption Standard]. The default is AES mode.

- ✧ **Pass Phrase :** Create a password using 8-63 ASCII characters (case-sensitive letters, numbers and symbols are allowed).
- ✧ **Key renewal Interval :** Set the key's renewal period. (3600 is the default)

6.3 Advanced Settings

This section is to configure the advanced wireless setting of the Router, including the Radio Preamble, 802.11g/n Rate, Fragmentation Threshold, RTS Threshold, etc.



- ✧ **BG protection Mode:** Auto by default. It is for 11b/g wireless client to connect to 11n wireless network

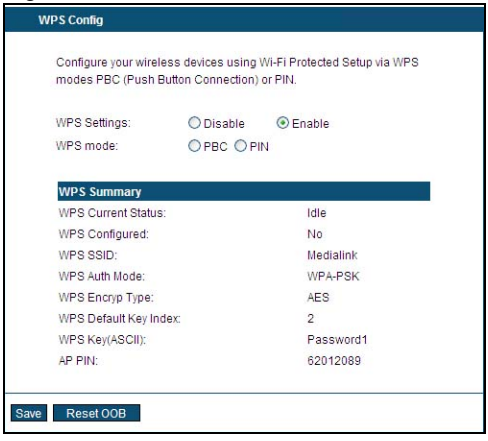
smoothly in a complicated wireless area.

- ✧ **Basic Data Rates:** For different requirement, you can select one of the suitable Basic Data Rates. Here, default value is (1-2-5.5.-11Mbps…). It is recommended not to modify this value.
- ✧ **Beacon Interval:** Set the beacon interval of wireless radio. Default value is 100. It is recommended not to modify this value.
- ✧ **Fragment Threshold:** The fragmentation threshold defines the maximum transmission packet size in bytes. The packet will be fragmented if the arrival is bigger than the threshold setting. The default size is 2346 bytes. It is recommended not to modify this value.
- ✧ **RTS Threshold:** RTS stands for “Request to Send”. This parameter controls what size data packet the frequency protocol issues to RTS packet. The default value of the attribute is 2347. It is recommended not to modify this value in SOHO environment.
- ✧ **TX Power:** Set the output power of wireless radio. The default value is 100.
- ✧ **WMM Capable:** This will enhance the data transfer performance of multimedia data when they’re being transferred over wireless network. It is recommended to enable this option.
- ✧ **APSD Capable:** It is used for auto power-saved service.

The default is disabled.

6.4 WPS Settings

WPS (Wi-Fi Protected Setting) can be easy and quick to establish the connection between the wireless network clients and the device through encrypted contents. The users only enter PIN code or press WLAN/WPA button on the panel to configure it without selecting encryption method and secret keys by manual. In the “Wireless Settings” menu, click “WPS settings” to enter the next screen.


WPS Config
Configure your wireless devices using Wi-Fi Protected Setup via WPS modes PBC (Push Button Connection) or PIN.
WPS Settings: Disable Enable
WPS mode: PBC PIN
WPS Summary
WPS Current Status: Idle
WPS Configured: No
WPS SSID: Medialink
WPS Auth Mode: WPA-PSK
WPS Encryp Type: AES
WPS Default Key Index: 2
WPS Key(ASCII): Password1
AP PIN: 62012089
Save
Reset OOB

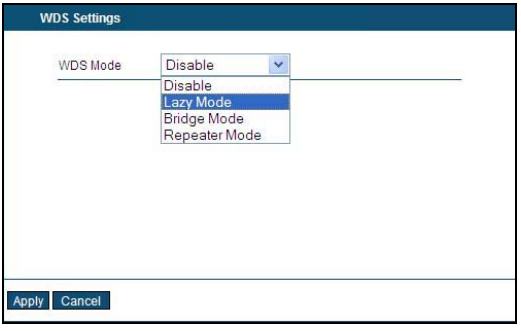
- ✧ **WPS settings :** To enable or disable WPS function. The default is “enable”.
- ✧ **WPS mode :** Provide two ways: PBC (Push-Button Configuration) and PIN code.

- **PBC :** Select the PBC or press the WLAN/WPS button on the back of the device for about one second and the WPS indicator will be blinking for 2 minutes. While the light is blinking, you can enable another device to implement the WPS/PBC negotiation between them by pressing the device's WPS button. Two minutes later, the WPS indicator will be off, which means the WPS connection is completed. If more clients are added, repeat the above steps. At present, the WPS supports up to 32 clients access.)
- **PIN :** If this option is enabled, you need to enter a wireless client's PIN code in the field and keep the same code in the WPS client.
- **WPS Summary :** Shows the current state of Wi-Fi protected setting, including authorized mode, encryption type, default key and other information.
- **WPS Current Status :** Idle means WPS in idle state. Start MSC process means the process has been started and is waiting to be connected. Configured means the negotiation is successful between server and clients.
- **WPS Configured :** "Yes" means WPS feature is enabled and active. "No" means it is not active. If a passphrase or key is used with normal security settings, then "No" will display here.
- **WPS SSID :** Show the main SSID set by WPS.
- **WPS Auth. Mode :** The authorization mode deployed by WPS, generally WPA/WPA2-personal mode.

- ✧ **WPS Encrypt Type :** The encryption type used by WPS, generally AES/TKIP.
- ✧ **WPS Key :** The effective key generated by AP automatically.
- ✧ **AP PIN (KEY) :** The PIN code used by default (located on the bottom of the router).
- ✧ **Reset OOB :**When this button is pressed, the WPS client will be idle state, and WPS indicator will be turned off. AP will not respond the WPS client's requests and the security mode will be set as WPA mode.

6.5 WDS Settings

WDS (Wireless Distribution System) is used to expand wireless coverage area. This Router provides three modes: Lazy, Bridge and Repeater.



NOTE: Before you enable WDS on a primary or secondary router configure each router as follows:

Primary Router Configuration

- ✧ IP Adress: 192.168.0.1
- ✧ Subnet Mask: 255.255.255.0
- ✧ WLAN SSID: Your Choice
- ✧ WLAN Security: Your Choice
- ✧ Broadcast Channel: Your choice (default is 6)
- ✧ Channel Extension: Your choice (default is 10)
- ✧ WDS Mode: Lazy
- ✧ WDS Encrypt: None
- ✧ DHCP Server: Enabled
- ✧ Prevent Network Attack (Firewall): Enabled

Secondary Router Configuration

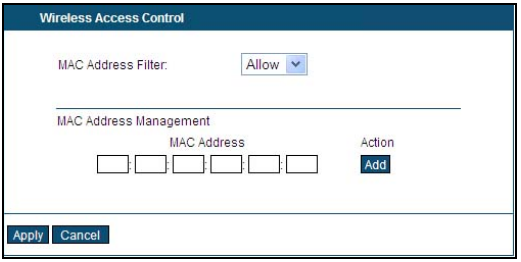
- ✧ IP Address: 192.168.0.X (last digit different than Primary)
- ✧ Subnet Mask: 255.255.255.0
- ✧ WLAN SSID: Your Choice (make it different from Primary Router so you can tell the routers apart)
- ✧ WLAN Security: Your Choice (doesn't have to be the same as Primary Router, but it is recommended so you can remember it easily)
- ✧ Broadcast Channel: 6 (these channels don't have to be 6 but it has to match Primary Router)
- ✧ Channel Extension: 10 (Same thing. doesn't have to be 10 but has to match Primary Router)
- ✧ DHCP Server: Disabled
- ✧ Prevent Network Attack (Firewall): Disabled

- ✧ **Lazy:** Use this mode on the primary router connected directly to the ISP (modem) when additional routers are used as additional access points. The secondary routers must be set to "Bridge" or "Repeater" when this option is selected.

- **Bridge:** This setup is used for when you want to plug a device in the secondary router and have the secondary router wirelessly connect to the primary router. Setup a secondary router as a wired or wireless access point. Connect an Ethernet cable to the LAN port of the Secondary router. (Primary router must be set to "Lazy"). Click "Open Scan" and select the MAC address of the Primary router to connect the two devices and establish a wider network.
- **Repeater Mode :** Setup a secondary router as a Wireless Access Point. (Primary router must be set to "Lazy"). Click "Open Scan" and select the MAC address of the Primary router to connect the two devices and establish a wider network.
- **Encrypt Type:** Select one from WEP, TKIP, AES for security here. (**Note:** It is recommended to leave this disabled and only use the Wireless Security Settings instead.)
- **Pass phrase:** Enter the encrypted key for wireless devices. (**Note:** It is recommended to leave this disabled and only use the Wireless Security Settings instead.)
- **AP MAC:** Input the MAC address of another (opposing) wireless router you want to connect.
- **Reboot the Router:** Click "System Tools->Reboot" when finished configuring WDS.

6.6 Access Control (Wireless MAC Filtering)

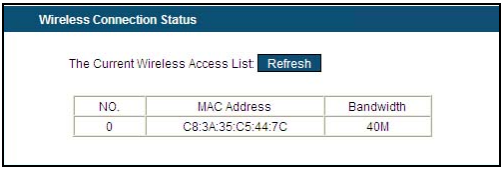
Allow or block specific wireless clients via their MAC Address to the wireless network. Select “Wireless Settings -> Access Control” to display the following screen:



- **MAC Address Filter :** Enable/disable MAC address filter. Select “Off” to disable MAC address filter; “Block” to prevent the MAC addresses in the list from accessing the wireless network; “Allow” to allow the MAC address in the list to access the wireless network.
- **MAC Address Management :** Input the MAC address to implement the filter policy. Click “Add” to finish the MAC add operation.
- **MAC list :** Show the added MAC addresses. You can add or delete them.

6.7 Connection Status

This page shows wireless client's connection status, including MAC address, Channel bandwidth, etc. Select "Wireless Settings->Connection Status" to enter the following screen:

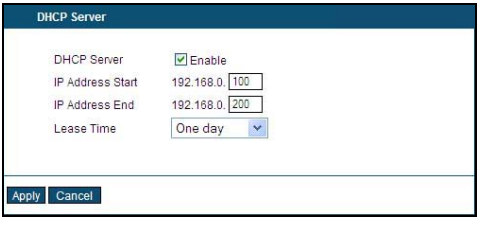


- **MAC Address :** Shows current MAC addresses of the hosts connecting to the Router.
- **Bandwidth :** Shows current bandwidth of the hosts (wireless client).

Chapter 7 DHCP Server

7.1 DHCP Settings

DHCP (Dynamic Host Control Protocol) assigns an IP address to the computers on the LAN/private network. When you enable the DHCP Server, the DHCP Server will allocate automatically an unused IP address from the IP address pool to the requesting computer in premise of activating "Obtain an IP Address Automatically". Specify the starting and ending address of the IP Address pool to establish the range of your IP addresses. "100" to "200" is set by default.



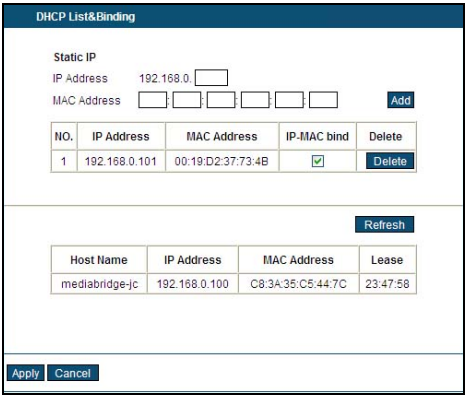
- ✧ **DHCP Server:** Click the checkbox to enable/disable DHCP server.
- ✧ **IP Address Start/End:** Enter the range of IP address for DHCP server distribution.
- ✧ **Lease Time:** The length of the IP address lease.

For example :

If the lease time is an hour, then DHCP server will reclaim the IP address every hour.

7.2 DHCP List and Binding

Here you can manually control which IP addresses are associated with each device in your network but typing in a “Static IP Address” within the range set. Then specifiy a MAC address of the device you want to assign the IP address to and click “Add”. Repeat as necessary.

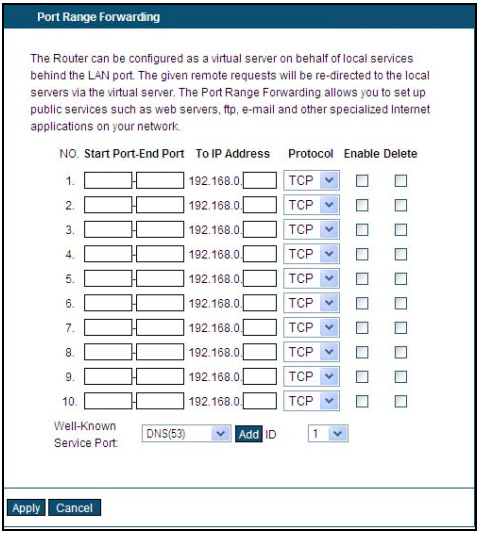


- ✧ **IP Address:** Enter the IP address which needs to be bound.
- ✧ **MAC Address:** Enter the MAC address of the computer you want to assign the above IP address. Click “Add” to add the entry in the list.
- ✧ **Hostname:** The name of the computer which is added a new IP address.
- ✧ **Lease Time:** The left time length of the corresponding IP address lease.

Chapter 8 Virtual Server

8.1 Port Range Forwarding

This section deals with the port range forwarding. The Port Range Forwarding allows you to set up a range of public services such as web servers, ftp, e-mail and other specialized Internet applications to an assigned IP address on your LAN. See www.portforward.com for general help with Port Forwarding.


Port Range Forwarding
The Router can be configured as a virtual server on behalf of local services behind the LAN port. The given remote requests will be re-directed to the local servers via the virtual server. The Port Range Forwarding allows you to set up public services such as web servers, ftp, e-mail and other specialized Internet applications on your network.
NO. Start Port-End Port To IP Address Protocol Enable Delete
1. 192.168.0. TCP
2. 192.168.0. TCP
3. 192.168.0. TCP
4. 192.168.0. TCP
5. 192.168.0. TCP
6. 192.168.0. TCP
7. 192.168.0. TCP
8. 192.168.0. TCP
9. 192.168.0. TCP
10. 192.168.0. TCP
Well-Known Service Port: DNS(53) Add ID 1
Apply Cancel

✧ **Start / End Port:** Enter the start/end port number which ranges the External ports used to set the server or

Internet applications.

- ✧ **IP Address:** Enter the IP address of the PC where you want to set the applications.
- ✧ **Protocol:** Select the protocol (TCP/UDP/Both) for the application.
- ✧ **Delete/Enable:** Click to check it for corresponding operation.
- ✧ **Well-Known Service Port:** Select the well-known services as DNS, FTP from the drop-down menu to add to the configured one above.
- ✧ **Add**: Add the selected well-known port to the policy ID.

NOTE:

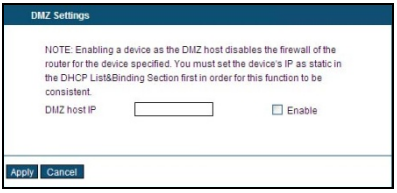
If you set the virtual server of the service port as 80, you must set the Web management port on Remote Web Management page to be any value except 80 such as 8080. Otherwise, there will be a conflict to disable the virtual server.

8.2 DMZ Settings

(For Gaming Systems/Video Conferencing)

The DMZ function allows one computer in LAN to be exposed to the Internet for a special-purpose service as Internet

gaming or videoconferencing.


DMZ Settings
NOTE: Enabling a device as the DMZ host disables the firewall of the router for the device specified. You must set the device's IP as static in the DHCP List&Binding Section first in order for this function to be consistent.
DMZ host IP
Enable
Apply
Cancel

- **DMZ Host IP Address:** The IP address of the computer/game system you want to expose.
- **Enable:** Click the checkbox to enable the DMZ host.
- **IMPORTANT:** When the DMZ host is enabled, the firewall settings of the DMZ host will not function.

8.3 UPNP Settings

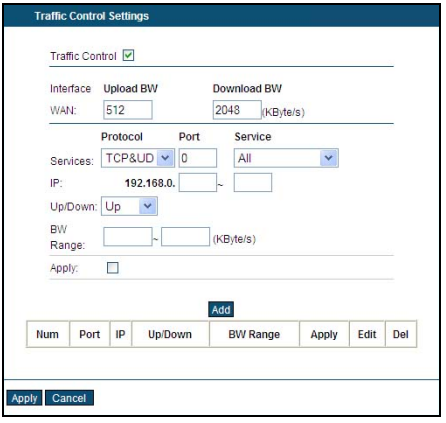
Latest Universal Plug and Play is supported. This function goes into effect on Windows XP or Windows ME or this function would go into effect if you have installed software that supports UPnP. With the UPnP function, host in LAN can request the router to process some special port switching so as to enable host outside to visit the resources in the internal host.

Enable UPnP: Click the checkbox to enable the UPnP.

Chapter 9 Traffic Control

9.1 Traffic Control

Traffic control is used to limit communication speed in the LAN and WAN. Up to 20 entries can be supported with the capability for at most 254 PCs' speed control, including IP address range configuration.



- ✧ **Enable Traffic Control:** To enable or disable the internal IP bandwidth control. The default is disabled.
- ✧ **Interface:** To limit the uploading and downloading bandwidth in WAN port.
- ✧ **Service:** To select the controlled service type, such as HTTP service.
- ✧ **IP Starting Address:** The first IP address for traffic

control.

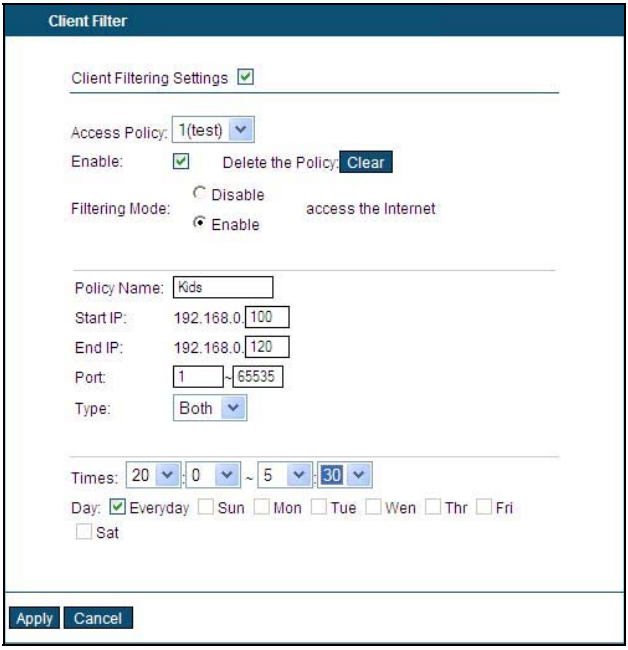
- **IP Ending Address:** The last IP address for traffic control.
- **Uploading/Downloading:** To specify the traffic heading way for the selected IP addresses: uploading or downloading.
- **Bandwidth:** To specify the uploading/downloading Min. /Max. Traffic speed (KB/s), which can not exceed the WAN speed.
- **Apply:** To enable the current editing rule. If not, the rule will be disabled.
- **Add:** After editing the rule, click the “Add” button to add the current rule to rule list.
- **Apply:** Click “Apply” to activate the current rule.
- **Cancel:** Click “Cancel” to cancel.

Chapter 10 Security Settings

10.1 Client Filter Settings

Control and limit specific computers and devices on the network from accessing the internet at specific times of the day.

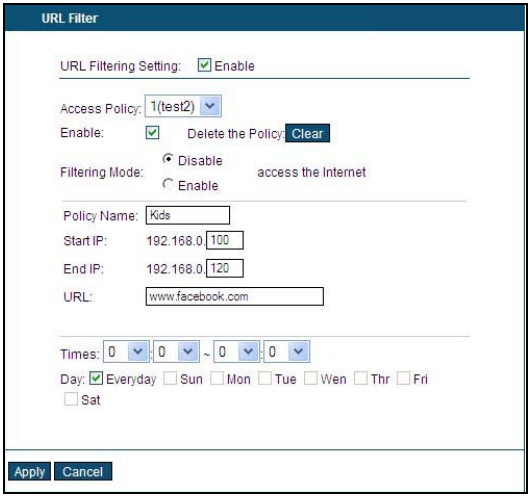
The example below shows a policy that blocks the IP addresses from 192.168.0.100 to 120 from accessing the internet Sunday through Thursday 9pm to 5:30am.


Client Filter
Client Filtering Settings
Access Policy: 1(test)
Enable:
Delete the Policy: Clear
Filtering Mode: Disable Enable access the Internet
Policy Name: Kids
Start IP: 192.168.0. 100
End IP: 192.168.0. 120
Port: 1 ~ 65535
Type: Both
Times: 20 : 0 ~ 5 : 30
Day: Everyday Sun Mon Tue Wen Thr Fri Sat
Apply Cancel

- **Client Filter:** Check to enable client filter.
- **Access Policy:** Select one number from the drop-down menu. Set up to 10 rules (policies).
- **Enable:** Check to enable the access policy.
- **Clear the Policy:** Click “Clear” button to clear all settings for the policy.
- **Filter Mode:** Click one radio button to enable or disable to access the Internet.
- **Policy Name:** Enter a name for the access policy selected.
- **IP Start/End:** Enter the starting/ending IP address for the computer/device you want the policy to apply to. You must have manually assigned IP addresses to the clients you wish to control or else the client’s IP address will change when the lease runs out.
- **Port No.:** Enter the port range based over the protocol for access policy. If you don’t know the specific Ports you want to block, enter 1~99999 to block them all.
- **Protocol:** Select one protocol (TCP/UDP/Both) from the drop-down menu. If you’re unsure, select “Both”
- **Times:** Select the time range of client filter.
- **Days:** Select the day(s) to run the access policy.

10.2 URL Filter Settings

Limit or control the websites that can be accessed by specific computers/devices on the network.


URL Filter
URL Filtering Setting: Enable
Access Policy: 1(test2)
Enable: Delete the Policy: Clear
Filtering Mode: Disable Enable access the Internet
Policy Name: Kids
Start IP: 192.168.0. 100
End IP: 192.168.0. 120
URL: www.facebook.com
Times: 0 : 0 ~ 0 : 0
Day: Everyday Sun Mon Tue Wen Thr Fri Sat
Apply Cancel

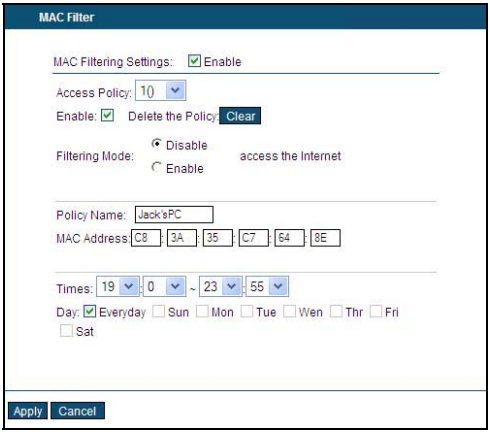
- ✧ **URL Filter:** Check to enable URL filter.
- ✧ **Access Policy:** Select one number from the drop-down menu.
- ✧ **Enable:** Check to enable the access policy.
- ✧ **Clear the Policy:** Click “Clear” button to clear all settings for the policy.
- ✧ **Filter Mode:** Click one radio button to enable or disable to access the Internet.
- ✧ **Policy Name:** Enter a name for the access policy selected.
- ✧ **Start/End IP:** Enter the starting/ending IP address.

- ✧ **URL Strings:** Specify the text strings or keywords needed to be filtered. If any part of the URL contains these strings or words, the web page will not be accessible and displayed.
- ✧ **Times:** Select the time range of client filter.
- ✧ **Days:** Select the day(s) to run the access policy.

10.3 MAC Address Filter (Parental Control)

Limit or Control Access to the internet for specific computers on the network at certain times of the day.

For example: The example below shows “Jack’s PC” will not have internet access from 10:00pm to 6am everyday.


MAC Filter
MAC Filtering Settings: Enable
Access Policy: 10
Enable: Delete the Policy: Clear
Filtering Mode: Disable Enable access the Internet
Policy Name: Jack'sPC
MAC Address: C8 3A 35 C7 64 8E
Times: 19 : 0 ~ 23 : 55
Day: Everyday Sun Mon Tue Wen Thr Fri Sat
Apply Cancel

- **MAC Address Filter:** Check to enable MAC address filter.
- **Access Policy:** Select one number from the drop-down menu.
- **Enable:** Check to enable the access policy.
- **Clear the Policy:** Click “Clear” button to clear all settings for the policy.
- **Filter Mode:** Click one radio button to enable or disable to access the Internet.
- **Policy Name:** Enter a name for the access policy selected.
- **MAC Address:** Enter the MAC address you want to run the access policy.
- **Times:** Select the time range of client filter.
- **Days:** Select the day(s) to run the access policy.
- **Apply :** Click to make the settings go into effect.

10.4 Prevent Network Attack (Firewall)

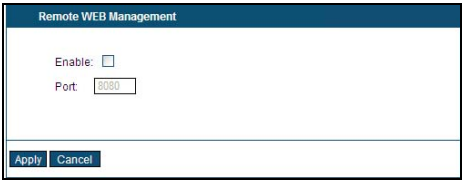
This section is to protect the internal network from exotic attack such as SYN Flooding attack, Smurf attack, LAND attack, etc. Once detecting the unknown attack, the Router will restrict its bandwidth automatically.

The attacker's IP address can be found from the "System Log".

Prevent Network Attack: Check to enable it for attack prevention.

10.5 Remote Web Management

This section is to allow the network administrator to manage the Router remotely. If you want to access the Router from outside the local network, please select the "Enable".



- ✧ **Enable:** Check to enable remote web management.
- ✧ **Port:** The management port open to outside access. The default value is 8080.
- ✧ **WAN IP Address:** Specify the range of the WAN IP address for remote management.

Note :

1. **If you want to login the device's Web-based interface via port 8080, you need use the format of WAN IP address: port (for example http://219.134.32.101: 8080) to implement remote login.**
2. **If your WAN IP address starts and ends with 0.0.0.0, it means all hosts in WAN can implement remote Web management. If you change the WAN IP address as 218.88.93.33-218.88.93.35, then only the IP addresses as 218.88.93.33, 218.88.93.34 and 218.88.93.35 can access the Router.**

For example:

If you want to configure the IP address 218.88.93.33 to access the device's web interface, please set it as follows:

10.6 WAN Ping

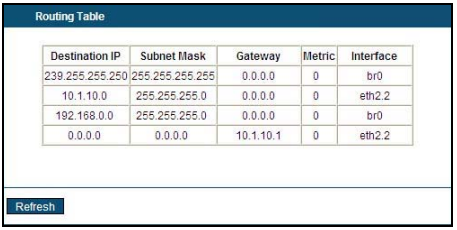
The ping test is to check the status of your internet connection. When disabling the test, the system will ignore the ping test from WAN.

✧ **Ignore Ping from WAN:** Check to ignore the ping request and give no reply.

Chapter11 Routing Setting

11.1 Routing Table

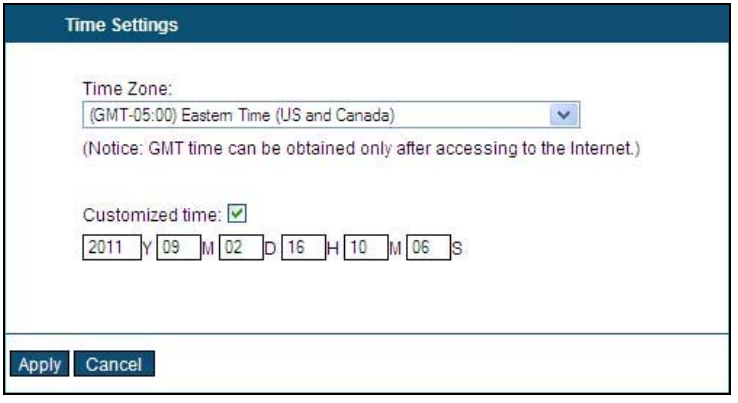
The main duty for a router is to look for a best path for every data frame, and transfer this data frame to a destination. So, it's essential for the router to choose the best path, i.e. routing arithmetic. In order to finish this function, many transferring paths, i.e. routing table, are saved in the router, for choosing when needed.



Chapter 12 System Tools

12.1 Time Settings

This section is to select the time zone for your location. If you turn off the Router, the settings for time disappear. However, the Router will automatically obtain the GMT time again once it has access to the Internet.


Time Settings
Time Zone:
(GMT-05:00) Eastern Time (US and Canada)
(Notice: GMT time can be obtained only after accessing to the Internet.)
Customized time:
2011 Y 09 M 02 D 16 H 10 M 06 S
Apply
Cancel

Time Zone: Select your time zone from the drop-down menu.

Customized time: Enter the time you customize.

Note :

When the Router is powered off, the time setting will be lost. Before the Router will obtain GMT time automatically, you need connect with the Internet

and obtain the GMT time, or set the time on this page first. Then the time in other features (e.g. firewall) can be activated.

12.2 DDNS

The **DDNS (Dynamic Domain Name System)** is supported in this Router. It is to assign a fixed host and domain name to a dynamic Internet IP address, which is used to monitor hosting website, FTP server and so on behind the Router. If you want to activate this function, please select "Enable" and a DDNS service provider to sign up.

✧ **Main Features:** Your ISP provides dynamic IP address, DDNS is used to capture the changeable IP address and match the fixed domain. Then users can have access to

the Internet to communicate with others.

DDNS can help you establish virtual host in your home and company.

- ✧ **DDNS:** Click the radio button to enable or disable the DDNS service.
- ✧ **Service Provider:** Select one from the drop-down menu and press “Sign up” for registration.
- ✧ **User Name:** Enter the user name the same as the registration name.
- ✧ **Password:** Enter the password you set.
- ✧ **Domain Name:** Enter the domain name which is optional.

For example :

In the local host 192.168.0.10 establish a Web server, and register in 3322.org as follows:

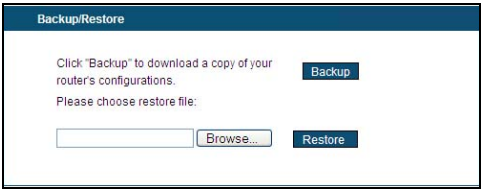
User name	Medialink
Password	123456
Domain Name	Medialink.vicp.net

After mapping the port in the virtual server, setting account information in DDNS server and in the address field entering http://Medialink.3322.org, you can access the Web page.

12.3 Backup/Restore Settings

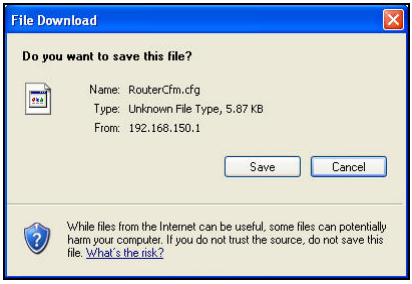
The device provides backup/restore settings, so you need set

a directory to keep these parameters.



Backup Setting :

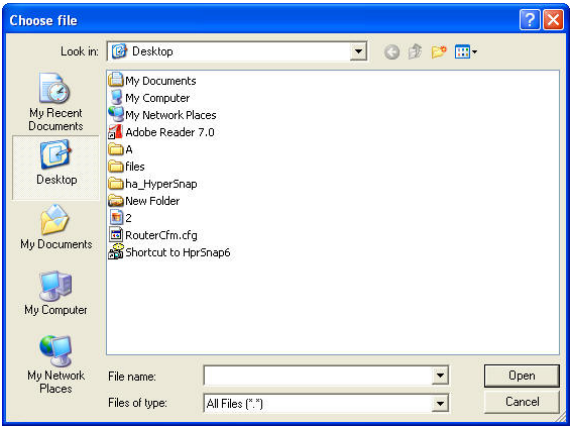
Click “Backup” button to back up the Router’s settings and select the path for save.


File Download
Do you want to save this file?
Name: RouterCfm.cfg
Type: Unknown File Type, 5.87 KB
From: 192.168.150.1
Save
Cancel
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not save this file. What's the risk?

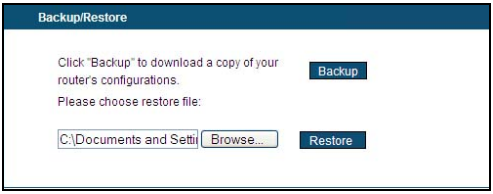
Click “Save” to save the configuration files.

Restore Setting :

Click “Browse” button to select the backup files.

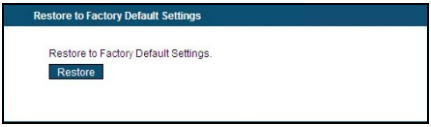


Click “Restore” button to restore previous settings.



12.4 Restore to Factory Default Setting

This button is to reset all settings to the default values. It means the Router will lose all the settings you have set. So please Note down the related settings if necessary.



✧ **Restore:** Click this button to restore to default settings.

Factory Default Settings:

User Name: admin

Password: admin

IP Address: 192.168.0.1

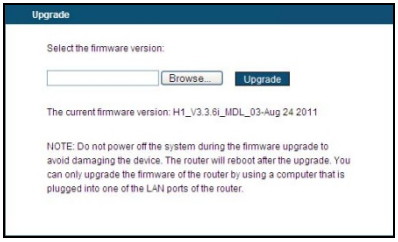
Subnet Mask: 255.255.255.0

NOTE:

After restoring to default settings, please restart the device, then the default settings can go into effect.

12.5 Upgrade Firmware

The Router provides the firmware upgrade by clicking the "Upgrade" after browsing the firmware upgrade packet which you can download from www.medialinkproducts.com.


Upgrade
Select the firmware version:
Browse...
Upgrade
The current firmware version: H1_V3.3.6i_MDL_03-Aug 24 2011
NOTE: Do not power off the system during the firmware upgrade to avoid damaging the device. The router will reboot after the upgrade. You can only upgrade the firmware of the router by using a computer that is plugged into one of the LAN ports of the router.

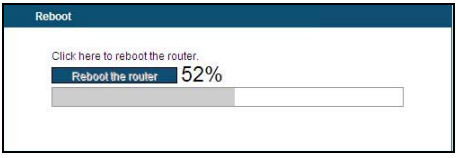
✧ **Browse:** click this button to select the upgrade file.

✧ **Upgrade:** click this button to start the upgrading process. After the upgrade is completed, the Router will

reboot automatically.

12.6 Reboot the Router

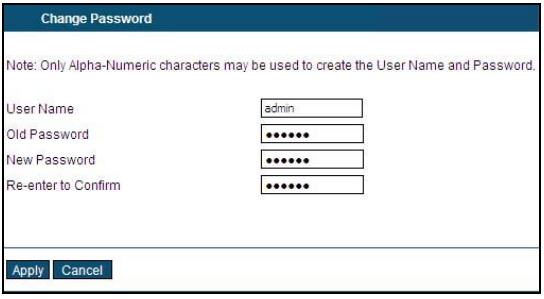
Rebooting the Router makes the settings configured go into effect or to set the Router again if setting failure happens.



Reboot the router: Click this button to reboot the device.

12.7 Change Password

This section is to set a new user name and password to better secure your router and network. (This is not necessary unless you want to limit the people already on your network from accessing the router's settings.)



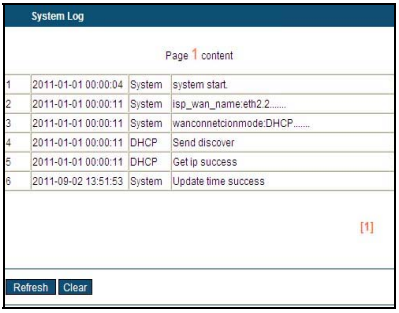
- **User Name**: Enter a new user name for the device.
- **Old Password**: Enter the old password.
- **New Password**: Enter a new password.
- **Re-enter to Confirm**: Re-enter to confirm the new password.

NOTE:

The only people able to access the router's GUI are the people connected to your network through a wired or wireless connection. Changing the password to the GUI is not necessary unless you want to restrict access to the GUI from devices that are connected to the network. (For example: if Parental Control is enabled, you may want to change this password)

12.8 System Log

This section is to view the system log. Click the “Refresh” to update the log. Click “Clear” to clear all shown information. If the log is over 150 records, it will clear them automatically.


System Log
Page 1 content
1 2011-01-01 00:00:04 System system start.
2 2011-01-01 00:00:11 System isp_wan_name:eth2.2.....
3 2011-01-01 00:00:11 System wanconnetcionmode:DHCP.....
4 2011-01-01 00:00:11 DHCP Send discover
5 2011-01-01 00:00:11 DHCP Get ip success
6 2011-09-02 13:51:53 System Update time success
[1]
Refresh
Clear

- ✧ **Refresh:** Click this button to update the log.
- ✧ **Clear:** Click this button to clear the current shown log.

12.9 Logout

After you have finished the settings completely, in logout page click “OK” to logout of the router GUI.

*** This Logout function does not work properly in all Internet Browsers. Internet Explorer is the recommended Internet Browser to use for adjusting the router’s settings.**

Appendix 1 : Glossary

Access Point (AP): Any entity that has station functionality and provides access to the distribution services, via the wireless medium(WM) for associated stations.

Channel: An instance of medium use for the purpose of passing protocol data units (PDUs) that may be used simultaneously, in the same volume of space, with other instances of medium use(on other channels) by other instances of the same physical layer (PHY),with an acceptably low frame error ratio(FER) due to mutual interference.

SSID: Service Set identifier. An SSID is the network name shared by all devices in a wireless network. Your network's SSID should be unique to your network and identical for all devices within the network. It is case-sensitive and must not exceed 20 characters (use any of the characters on the keyboard).Make sure this setting is the same for all devices in your wireless network.

WEP: Wired Equivalent Privacy (WEP) is the method for secure wireless data transmission. WEP adds data

encryption to every single packet transmitted in the wireless network. The 40bit and 64bit encryption are the same because of out 64 bits, 40 bits are private. Conversely, 104 and 128 bit are the same. WEP uses a common KEY to encode the data. Therefore, all devices on a wireless network must use the same key and same type of encryption. There are 2 methods for entering the KEY; one is to enter a 16-bit HEX digit. Using this method, users must enter a 10-digit number (for 64-bit) or 26-digit number (for 128-bit) in the KEY field. Users must select the same key number for all devices. The other method is to enter a text and let the computer generate the WEP key for you. However, since each product use different method for key generation, it might not work for different products. Therefore, it is NOT recommended using.

WPA / WPA2: A security protocol for wireless networks that builds on the basic foundations of WEP. It secures wireless data transmission by using a key similar to WEP, but the added strength of WPA is that the key changes dynamically. The changing key makes it much more difficult for a hacker to learn the key and gain access to the network.WPA2 is the second generation of WPA security and provides a stronger encryption mechanism through Advanced Encryption Standard (AES), which is a requirement for some

government users.